

CLAIMS

1. A dyeable acrylic shrinkable fiber produced from a spinning solution comprising a polymer composition in which 50 to 99 parts by weight of a polymer (A) comprising 40 to 80 wt% of acrylonitrile, 20 to 60 wt% of a halogen-containing monomer and 0 to 5 wt% of a sulfonic acid-containing monomer is mixed with 1 to 50 parts by weight of a polymer (B) comprising 5 to 70 wt% of acrylonitrile, 20 to 94 wt% of other copolymerizable monomer and 1 to 40 wt% of a sulfonic acid-containing monomer, wherein the polymer (A) and the polymer (B) are incompatible with each other.
2. The acrylic shrinkable fiber according to claim 1, wherein the total content of the sulfonic acid group-containing monomers in the polymers (A) and (B) is 0.1 to 10 parts by weight based on the total monomer content in the polymers (A) and (B).
3. The acrylic shrinkable fiber according to claim 1 or 2, wherein the other copolymerizable monomer in the polymer (B) is an acrylic acid ester.
4. The acrylic shrinkable fiber according to claims 1, 2 or 3, wherein the spinning solution is phase separated into particles having a particle size of 0.1 to 30  $\mu\text{m}$ .
5. The acrylic shrinkable fiber according to claims 1, 2, 3 or 4, having a dyeing shrinkage percentage at 80°C or less of 10% or less.

6. The acrylic shrinkable fiber according to claims 1, 2, 3, 4 or 5, having a shrinkage percentage of 20% or more when dyed at 80°C or less and then treated with dry heat at 130°C for five minutes.

7. The acrylic shrinkable fiber according to claims 1, 2, 3, 4, 5 or 6, having a relative saturation value when dyed at 60°C or more of 0.1 or more and a relative saturation value at 70°C or more of 0.8 or more.

8. A process for producing the acrylic shrinkable fiber according to claims 1, 2, 3, 4, 5, 6 or 7, comprising carrying out relaxation treatment at 1 to 20%.